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Nonfatal Dog Bite–Related Injuries Treated in Hospital Emergency Departments — United States, 2001

In 1994, the most recent year for which published data are available, an estimated 4.7 million dog bites occurred in the United States, and approximately 799,700 persons required medical care (*1*). Of an estimated 333,700 patients treated for dog bites in emergency departments (EDs) in 1994 (*2*), approximately 6,000 (1.8%) were hospitalized (*3*). To estimate the number of nonfatal dog bite–related injuries treated in U.S. hospital EDs, CDC analyzed data from the National Electronic Injury Surveillance System-All Injury Program (NEISS-AIP). This report summarizes the results of the analysis, which indicate that in 2001, an estimated 368,245 persons were treated in U.S. hospital EDs for nonfatal dog bite–related injuries. Injury rates were highest among children aged 5–9 years. To reduce the number of dog bite–related injuries, adults and children should be educated about bite prevention, and persons with canine pets should practice responsible pet ownership (Box).

NEISS-AIP is operated by the U.S. Consumer Product Safety Commission and collects data about initial visits for all types and causes of injuries treated in U.S. EDs (*4*). NEISS-AIP data are drawn from a nationally representative subsample of 66 out of 100 NEISS hospitals, which were selected as a stratified probability sample of hospitals with a minimum of six beds and a 24-hour ED in the United States and its territories. NEISS-AIP provides data on approximately 500,000 injury- and consumer product–related ED cases each year.

The analysis included every nonfatal injury treated in a NEISS-AIP hospital ED in 2001 for which "dog bite" was listed as the external cause of injury. Because deaths are not captured completely by NEISS-AIP, patients who were dead on arrival or died in EDs were excluded. Each case was assigned a sample weight based on the inverse probability of selection; these weights were added to provide national estimates of dog bite–related injuries. Estimates were based on weighted data for 6,106 patients with dog bite–related injuries treated at NEISS-AIP hospital EDs during 2001. Confidence intervals (CIs) were calculated by using a direct variance estimation procedure that accounted for the sample weights and complex sample design. Rates were calculated by using U.S. Census Bureau population estimates for 2001 (*5*).

In 2001, an estimated 368,245 persons were treated for dog bite–related injuries (rate: 129.3 per 100,000 population) (Table). The injury rate was highest for children aged 5–9 years and decreased with increasing age. Approximately 154,625 (42.0%) dog bites occurred among children aged ≤14 years; the rate was significantly higher for boys (293.2 per 100,000 population) than for girls (216.7) ($p = 0.037$) (Figure 1). For persons aged ≥15 years, the difference between the rate for males (102.9) and females (88.0) was not statistically significant. The number of cases increased slightly during April–September, with a peak in July (11.1%). For injured persons of all ages, approximately 16,526 (4.5%) dog bite injuries were work-related (e.g., occurred to persons who were delivering mail, packages, or food; working at an animal clinic or shelter; or doing home repair work or installations). For

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BOX. Measures for preventing dog bites

- Consult with a professional (e.g., veterinarian, animal behaviorist, or responsible breeder) before choosing a dog to determine suitable breeds on the basis of the owner's lifestyle and physical environment.
- Exclude dogs with histories of aggression from households with children.
- Be sensitive to cues that a child is fearful or apprehensive about a dog and, if so, delay acquiring a dog.
- Spend time with a dog before buying or adopting it.
- Use caution when bringing a dog or puppy into the home of an infant or toddler.
- Spay/neuter virtually all dogs (this frequently reduces aggressive tendencies).
- Never leave infants or young children alone with any dog.
- Properly socialize and train any dog entering the household. Teach the dog submissive behaviors (e.g., rolling over to expose abdomen and relinquishing food without growling).
- Seek professional advice (e.g., from veterinarians, animal behaviorists, or responsible breeders) immediately if the dog develops aggressive or undesirable behaviors.
- Do not play aggressive games (e.g., wrestling) with a dog.
- Teach children basic safety around dogs and review regularly:
  - Never approach an unfamiliar dog.
  - Never run from a dog or scream.
  - Remain motionless when approached by an unfamiliar dog (e.g., "be still like a tree").
  - If knocked over by a dog, roll into a ball and lie still (e.g., "be still like a log").
  - Never play with a dog unless supervised by an adult.
  - Report stray dogs or dogs displaying unusual behavior to an adult immediately .
  - Avoid direct eye contact with a dog.
  - Do not disturb a dog who is sleeping, eating, or caring for puppies.
  - Do not pet a dog without allowing it to see and sniff you first.
  - If bitten, report the bite to an adult immediately.

persons aged ≥16 years, approximately 16,476 (7.9%) dog bite injuries were work-related.

Injuries occurred most commonly to the arm/hand (45.3%), leg/foot (25.8%), and head/neck (22.8%). The majority (64.9%) of injuries among children aged ≤4 years were to the head/neck region; this percentage decreased significantly with age ($p<0.01$) (Figure 2). Injuries to the extremities increased with age ($p<0.01$) and accounted for 86.2% of injuries treated

TABLE. Number, percentage, and rate* of nonfatal dog bite–related injuries treated in U.S. hospital emergency departments, by selected characteristics — National Electronic Injury Surveillance System-All Injury Program, United States, 2001

Characteristic	No.†	(%)	Rate	(95% CI§)
Age group (yrs)				
0–4	49,153	(13.3)	253.8	(218.9–288.7)
5–9	56,146	(15.2)	278.2	(234.8–321.6)
10–14	49,326	(13.4)	236.2	(203.1–269.4)
15–19	27,820	(7.6)	137.3	(108.6–166.0)
20–24	26,181	(7.1)	133.0	(105.9–160.2)
25–34	45,133	(12.3)	114.0	(99.2–128.7)
35–44	46,658	(12.7)	103.6	(89.1–118.2)
45–54	32,613	(8.9)	83.2	(72.4–94.0)
55–64	16,185	(4.4)	64.0	(49.5–78.4)
≥65	19,005	(5.2)	53.9	(45.5–62.2)
Unknown	25¶		—	—
Sex				
Male	202,735	(55.1)	145.0	(126.5–163.5)
Female	165,510	(44.9)	114.2	(103.8–124.5)
Treatment month				
January	21,994	(6.0)	7.7	(5.7–9.7)
February	24,945	(6.8)	8.8	(6.4–11.1)
March	27,511	(7.5)	9.7	(7.3–12.1)
April	36,108	(9.8)	12.7	(10.1–15.3)
May	34,284	(9.3)	12.0	(9.8–14.2)
June	34,742	(9.4)	12.2	(11.3–13.1)
July	40,828	(11.1)	14.3	(11.3–17.4)
August	34,716	(9.4)	12.2	(10.9–13.5)
September	32,983	(9.0)	11.6	(9.6–13.6)
October	27,372	(7.4)	9.6	(7.3–11.9)
November	25,011	(6.8)	8.8	(7.2–10.4)
December	27,749	(7.5)	9.7	(7.9–11.6)
Work-related				
Yes	16,526	(4.5)	5.8	(4.1–7.5)
No	350,554	(95.2)	123.1	(109.9–136.3)
Unknown	1,165¶	(0.3)	—	—
Body part injured				
Head/Neck	83,946	(22.8)	29.5	(26.0–32.9)
Face	*55,867*	*(15.2)*	*19.6*	*(17.0–22.2)*
Mouth	*17,029*	*(4.6)*	*6.0*	*(5.2–6.8)*
Ear	*5,475*	*(1.5)*	*1.9*	*(1.4–2.5)*
Head	*3,669*	*(1.0)*	*1.3*	*(0.8–1.8)*
Other (neck/eyeball)	*1,906*	*(0.5)*	*0.7*	*(0.3–1.0)*
Upper trunk (includes shoulder)	5036	(1.4)	1.8	(1.2–2.3)
Lower trunk	14,432	(3.9)	5.1	(3.8–6.4)
Arm/Hand	166,756	(45.3)	58.6	(54.2–62.9)
Hand	*66,969*	*(18.2)*	*23.5*	*(20.6–26.4)*
Lower arm	*45,482*	*(12.4)*	*16.0*	*(14.7–17.3)*
Finger	*34,787*	*(9.4)*	*12.2*	*(10.3–14.1)*
Upper arm	*8,645*	*(2.3)*	*3.0*	*(2.3–3.7)*
Wrist	*8,029*	*(2.2)*	*2.8*	*(2.2–3.4)*
Elbow	*2,843*	*(0.8)*	*1.0*	*(0.7–1.3)*
Leg/Foot	94,848	(25.8)	33.3	(26.2–40.4)
Lower leg	*54,388*	*(14.8)*	*19.1*	*(14.3–23.9)*
Upper leg	*25,379*	*(6.9)*	*8.9*	*(7.3–10.5)*
Knee	*5,317*	*(1.4)*	*1.9*	*(1.3–2.5)*
Foot/Toe	*5,063*	*(1.4)*	*1.8*	*(0.9–2.6)*
Ankle	*4,700*	*(1.3)*	*1.7*	*(1.1–2.2)*
Other	2,328¶	(0.6)	—	—
Unknown	899¶	(0.2)	—	—
Diagnosis				
Contusion/Abrasion/Hematoma	22016	(6.0)	7.7	(5.7–9.7)
Laceration	90,926	(24.7)	31.9	(27.3–36.5)
Puncture	148,180	(40.2)	52.0	(34.1–70.0)
Fracture/Dislocation	1,386	(0.4)	0.5	(0.2–0.8)
Amputation/Avulsion/Crush	2,854	(0.8)	1.0	(0.7–1.4)
Cellulitis/Infection	5,559	(1.5)	2.0	(1.0–2.9)
Unspecified dog bite/Other	97,324	(26.4)	34.2	(20.4–48.0)
Disposition				
Treated and released	361,692	(98.2)	127.0	(113.3–140.7)
Hospitalized/Observed/Transferred	5,921	(1.6)	2.1	(1.6–2.6)
Unknown	631¶	(0.2)	—	—
Total	**368,245**	**(100.0)**	**129.3**	**(115.9–142.7)**

* Per 100,000 population.
† Numbers might not sum to total because of rounding.
§ Confidence interval.
¶ Estimate might be unstable because the coefficient of variation is >30%.

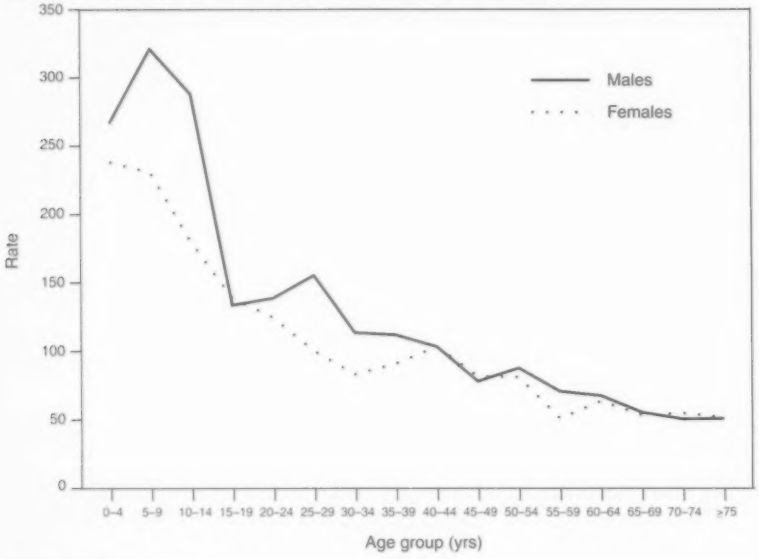
in EDs for persons aged ≥15 years. Injury diagnoses were described frequently as "dog bite" (26.4%); other diagnoses included puncture (40.2%), laceration (24.7%), contusion/abrasion/hematoma (6.0%), cellulitis/infection (1.5%), amputation/avulsion/crush (0.8%), and fracture/dislocation (0.4%). Overall, 98.2% of patients were treated and released from the ED.

Narrative comments in the medical records note common circumstances in which children and adults incurred dog bite–related injuries. Examples among children included a girl aged 18 months who was attacked by the family dog in the backyard and sustained an open depressed skull fracture, mandible fractures, and avulsion of an ear and part of a cheek; a boy aged 4 years who was bitten on the lip by a dog that was guarding her pups; and a girl aged 3 years who was bitten on the face when trying to take food away from the family dog. Examples among adults included a man aged 34 years who sustained an avulsion laceration to his left thumb while trying to break up a fight between his dogs; a woman aged 27 years who sustained multiple puncture wounds to her forearm, thumb, and chest while trying to help her dog, which had been hit by a car; and a woman aged 75 years who was bitten while she was trying to prevent her dog from attacking an Emergency Medical Technician who was attempting to transport her from home by ambulance.

Reported by: *J Gilchrist, MD, Div of Unintentional Injury Prevention; K Gotsch, MPH, JL Annest, PhD, G Ryan, PhD, Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC.*

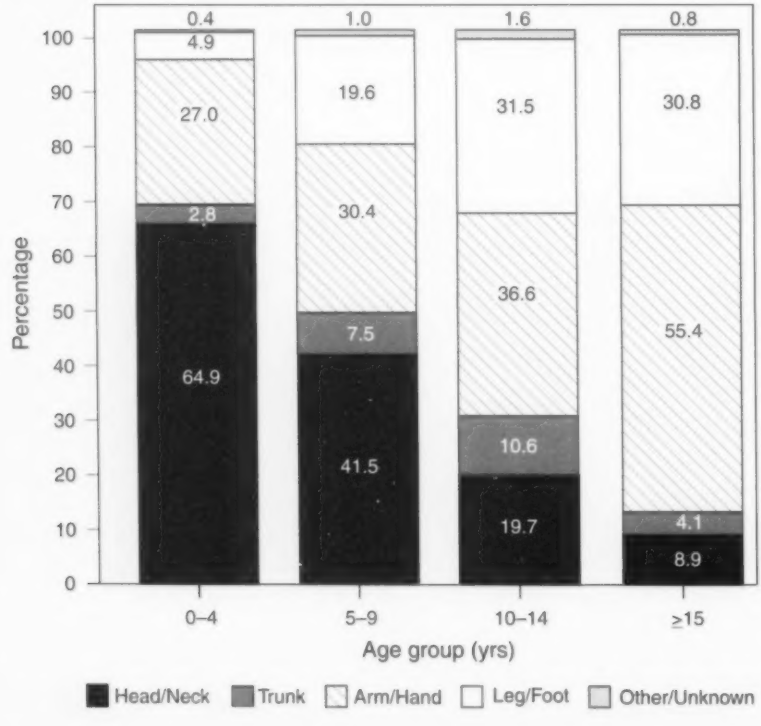
Editorial Note: In 2001, an estimated 68 million canines were kept as pets in the United States (*6*). This report is the first that uses data from an ongoing surveillance system to provide national estimates of the number of dog bite–related injuries treated in EDs. In 2001, an estimated 368,245 persons were treated for dog bites in EDs; this finding is consistent with a previous estimate of 334,000 persons treated annually for dog bites in EDs during 1992–1994 (*2*). Of the estimated 368,245 persons treated for dog bites in EDs, an estimated 154,625 (42%) were aged ≤14 years. Higher rates of dog

FIGURE 1. Rate* of nonfatal dog bite–related injuries treated in U.S. hospital emergency departments, by sex and age group — National Electronic Injury Surveillance System-All Injury Program, United States, 2001



* Per 100,000 population.

FIGURE 2. Percentage of nonfatal dog bite–related injuries treated in U.S. hospital emergency departments, by primary body part affected and age group — National Electronic Injury Surveillance System-All Injury Program, United States, 2001



bites for children aged ≤14 years also are consistent with previous reports (*1,7*). Narrative comments from medical records describing dog bite events underscore the importance of prevention messages.

Because children have higher rates of dog bites, prevention programs often are targeted to this group. Although boys aged ≤14 years have higher rates than girls the same age, all children need to be taught how to respond to dogs. A randomized controlled trial of a school-based intervention in Australia that taught children how to behave around and interact with dogs documented a substantial decrease in children's approach to and interaction with a strange dog (*8*). CDC is funding an evaluation of a similar school-based education program in Georgia aimed at increasing children's understanding of how to behave around and interact with dogs.

In addition to educating children properly, prevention efforts should encourage responsible dog ownership, including training, socializing, and neutering family pets. Previous research has indicated that the majority (80%) of dog bites incurred by persons aged ≤18 years are inflicted by a family dog (30%) or a neighbor's dog (50%) (*9*). During 1997–1998, a total of 75% of fatal dog bites were inflicted on family members or guests on the family's property (*10*). In 2001, an estimated 16,476 (8%) dog bites to persons aged ≥16 years were work-related, including some that occurred while persons were visiting homes as part of their work activities.

Additional strategies to encourage responsible pet ownership and reduce dog bites include regulatory measures (e.g., licensing, neutering, and registration programs and programs to control unrestrained animals) and legislation (*7*). "Dangerous" dog laws focus on dogs of any breed that have exhibited harmful behavior (e.g., unprovoked attacks on persons or animals) and place primary responsibility for a dog's behavior on the owner. Because a dog's tendency to bite depends on other factors in addition to genetics (e.g., medical and behavioral health, early experience, socialization and training, and victim behavior), such laws might be more effective than breed-specific legislation (*7*). These prevention strategies require further evaluation.

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The findings in this report are subject to at least five limitations. First, only nonfatal injuries treated in hospital EDs were included, and injuries treated in health-care facilities outside of an ED (e.g., a physician's office or an urgent care center) or those for which no care was received were not included. Previous estimates indicate that 17% of dog bite–related injuries are treated in medical facilities, of which 38% are seen in hospital EDs (*1*). Second, injury diagnoses were not specified for 26% of cases. Third, limited data are available on the circumstances of the event or the dog involved. Fourth, NEISS-AIP is designed to provide national estimates and does not provide state or local estimates. Finally, although the extent of human exposure to dogs might vary by age, sex, season, or other factors, these data are not available; as a result, the analysis did not account for exposure.

Prevention programs should educate both children and adults about bite prevention and responsible pet ownership. Additional information about preventing dog bites is available at http://www.cdc.gov/ncipc/duip/dogbites.htm.

Acknowledgments

This report is based on data contributed by T Schroeder, MS, C Downs, A McDonald, MA, and other staff of the Div of Hazard and Injury Data Systems, U.S. Consumer Product Safety Commission. P Holmgreen, MS, Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC.

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Heat-Related Deaths — Chicago, Illinois, 1996–2001, and United States, 1979–1999

Heat waves (i.e., ≥3 consecutive days of air temperatures ≥90° F [≥32.2° C]) are meteorologic events that contribute significantly to heat-related deaths. Exposure to excessive heat can cause illness, injury, and death. This report describes four cases of heat-related deaths*, as reported by the Office of the Medical Examiner, Cook County, Chicago, that occurred during 1996–2001; summarizes total heat-related deaths in Chicago during 1996–2001; and compares the number of heat-related deaths during the 1995 and 1999 Chicago heat waves. This report also summarizes trends in the United States during 1979–1999, describes risk factors associated with heat-related deaths and symptoms, and outlines preventive measures for heat-related illness, injury, and death. Persons at risk for heat-related death should reduce strenuous outdoor activities, drink water or nonalcoholic beverages frequently, and seek air conditioning.

Case Reports

Case 1. In June 1997, a woman aged 86 years with no known medical history was found unresponsive in her bedroom. Her grandson reported that the woman had kept the bedroom windows closed for a week and that the room was very hot. The room had no fan. Paramedics transported the woman to the hospital, where a rectal temperature of 108° F (42.2° C) was recorded. She was pronounced dead in the emergency department. An autopsy revealed moderate coronary atherosclerosis. Heat stroke was listed as the cause of death, with arteriosclerotic cardiovascular disease as a significant contributing condition.

Case 2. In July 1999, a woman aged 73 years whose medical history was unknown was found unresponsive behind a building. She had been seen earlier in the day drinking alcohol. Paramedics transported her to the hospital, where she was pronounced dead on arrival.

Her rectal temperature was registered as 108° F (42.2° C). An autopsy revealed a blood alcohol level of 117 mg/dL (legal blood alcohol limit in Illinois is 80 mg/dL) and a vitreous alcohol level of 157 mg/dL. The cause of death was listed as heat stroke.

* Defined as one in which exposure to high ambient temperatures either caused the death or contributed to it substantially, body temperature at the time of collapse was ≥105° F (≥40.6° C), the decedent had a history of exposure to high ambient temperature, and other causes of hyperthermia could reasonably be excluded (*1*). Because rates of death from other causes (e.g., cardiovascular and respiratory disease) increase during heat waves (*2,3*), deaths classified as caused by hyperthermia represent only a portion of heat-related mortality.

Case 3. In March 2000, a man aged 35 years was found unresponsive in a steam room at a health club. Before entering the steam room, the man reportedly had slurred speech, and his hands were shaking. He was transported to the hospital, where he was pronounced dead on arrival. An autopsy documented previous hypertensive cerebral damage and a recent right basal ganglia infarct. The cause of death was listed as hyperthermia caused by hypertensive cardiovascular disease.

Case 4. In September 2000, a girl aged 5 months was found unresponsive in the back seat of her parents' car by her mother. The child had been left mistakenly in the car for 9 hours while her parents were at work. Paramedics transported the child to the hospital, where she was pronounced dead on arrival. The medical examiner listed the cause of death as heat stroke.

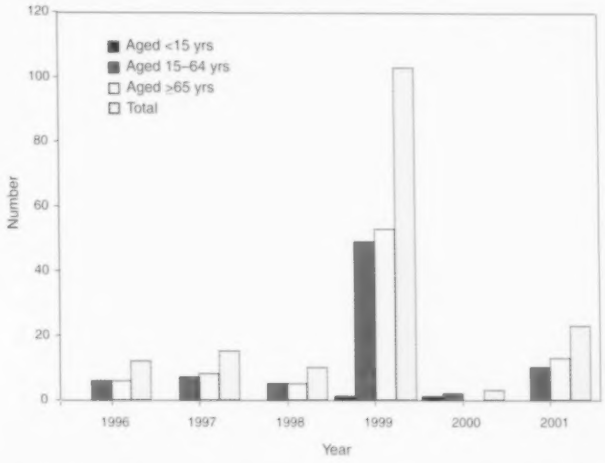
Summary of Heat-Related Deaths in Chicago and U.S. Trends

During the 1990s, Chicago experienced two heat waves. In July 1995, a heat wave resulted in 485 heat-related deaths and 739 excess deaths (*4*). An epidemiologic investigation of the heat wave identified advanced age and an inability to care for oneself as major risk factors for heat-related death (*5*). During 1999, a heat wave resulted in 103 heat-related deaths; 80 were attributed to extreme heat. Implementation of Chicago's Extreme Weather Operations Plan reduced the death toll by increasing the number of daily contacts for the elderly during the 1999 heat wave (*6*). During 1996–2001, annual totals of heat-related deaths across all age groups was highest in 1999 (Figure 1).

During 1979–1999, the most recent years for which national data are available, 8,015 deaths in the United States were heat-related†. A total of 3,829 (48%) were "due to weather conditions," 377 (5%) were "of man-made origins" (e.g., heat generated in vehicles, kitchens, boiler rooms, furnace rooms, and factories), and 3,809 (48%) were "of unspecified origin" (*7*). An average of 182 deaths per year (range: 54–651) were associated with excessive heat resulting from weather conditions. Of the 3,764 (98%) weather-related deaths for which age of decedent was reported, 1,891 (49%) occurred among persons aged 15–64 years, 1,709 (45%) occurred among persons aged ≥65 years, and 164 (4%) occurred among children aged <15 years (*7*). During 1979–1999, rates for heat-related deaths increased with age (Figure 2).

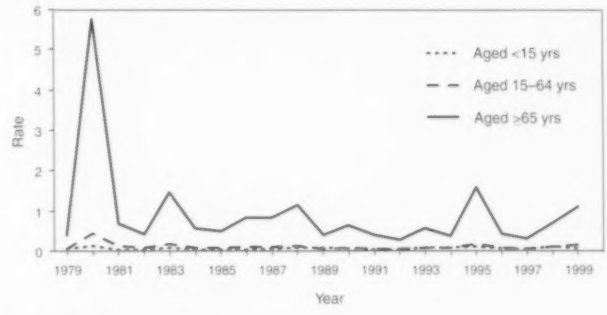
† During 1979–1998, the underlying cause of death attributed to excessive heat exposure was classified according to the *International Classification of Diseases, Ninth Revision* (ICD-9), code E900.0, "due to weather conditions"; code E900.1, "of man-made origins"; and code E900.9, "of unspecified origin." Data for 1999 were obtained from ICD-10; code X30, "exposure to excessive natural heat (deaths)," was added to the 1979–1998 ICD-9 code E900.0, "excessive heat due to weather conditions (deaths)." Data were obtained from the Compressed Mortality File of CDC's National Center for Health Statistics, which contains information from death certificates filed in the 50 states and the District of Columbia.

FIGURE 1. Annual totals of heat-related deaths attributed to weather conditions* and exposure to excessive natural heat†, by age group — Chicago, 1996–2001



* *International Classification of Diseases, Ninth Revision* (ICD-9), code E900.0.
† ICD-10, code X30.

FIGURE 2. Average annual rate* of heat-related deaths attributed to weather conditions† and exposure to excessive natural heat§, by age group and year — United States, 1979–1999



* Per 100,000 population.
† *International Classification of Diseases, Ninth Revision* (ICD-9), code E900.0.
§ ICD-10, code X30.

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Editorial Note: Exposure to high temperature for a sustained period can cause heat-related illness (hyperthermia) or death. The two most serious types of heat-related illness are heat

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exhaustion and heat stroke. Heat exhaustion is characterized by paleness, fatigue, muscle cramps, dizziness, headache, nausea or vomiting, and fainting. The skin is typically cool, and moistness and sweating might occur. The pulse rate is fast and weak, and breathing is fast and shallow. If untreated, heat exhaustion can progress to heat stroke (*8*). Heat stroke is a serious, often fatal condition characterized by a body temperature of >103° F (>39.4° C); red, hot, and dry skin (no sweating); rapid, strong pulse; throbbing headache; dizziness; nausea; confusion; and unconsciousness.

Elderly persons, children, and persons with certain medical conditions (e.g., heart disease) are at greatest risk for heat-related illness and death. Drinking alcohol, participating in strenuous outdoor physical activities in hot weather, and taking medications that reduce the body's ability to regulate its temperature or that inhibit perspiration also increase risk. Air conditioning is the most important protective factor against heat-related illness and death. For the 1995 and 1999 Chicago heat waves, the risk for heat-related death increased for persons with cardiac disease or psychiatric illness and for persons who lived alone. Having a working air conditioner and participating in group activities in which heat-related illness might be identified were the most important protective factors (*5,6*) (Box).

Heat-related morbidity and mortality could increase with periods of extreme heat (*9*). Many cities have developed emergency-response plans for heat waves. These response plans use information about risk factors and meteorologic conditions to implement prevention strategies that reduce morbidity and mortality from excessive heat (*10*). A heat-response plan also should recommend rolling energy blackouts in areas that use air conditioning to mitigate factors that increase the risk for heat-related morbidity and mortality. To defray energy costs, support of low-income populations might be necessary to allow the use of air-conditioning during summer months.

BOX. Measures for preventing heat-related deaths

During heat waves
- Check on elderly, disabled, or homebound persons frequently.
- Never leave children alone in cars and ensure that they cannot lock themselves in an enclosed space (e.g., a car trunk).
- Evaluate persons at risk for heat-related death frequently for heat-related hazards and illnesses, and take appropriate preventive action.
- Seek air-conditioned environments.

If exposure to heat cannot be avoided
- Reduce, eliminate, or reschedule strenuous activities.
- Drink water or nonalcoholic fluids frequently.
- Take showers regularly.
- Wear light-weight and light-colored clothing.
- Avoid direct sunlight.

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Multistate Outbreak of *Salmonella* Serotype Typhimurium Infections Associated with Drinking Unpasteurized Milk — Illinois, Indiana, Ohio, and Tennessee, 2002–2003

On December 10, 2002, the Clark County Combined Health District and the Ohio Department of Health (ODH) were notified of two hospitalized children infected with *Salmonella Enterica* serotype Typhimurium. Initial investigation implicated consumption of raw, unpasteurized milk purchased at a local combination dairy-restaurant (dairy) during November 27–December 13, 2002, as the cause. This report summarizes the subsequent investigation. Because 27 states still allow the sale of raw milk, and organizations continue their efforts to allow marketing and sale of raw milk to the public directly from the farm (*1,2*), consumer education about the hazards of raw milk and a careful review of existing policies are needed.

The dairy comprised a working dairy farm, restaurant, snack bar, and petting zoo with goats, cows, calves, lambs, and pigs. At the time of the epidemiologic investigation in December 2002, the workforce comprised 211 workers, including 16 members of the owner family. In 2002, the dairy was the only place in Ohio that sold raw milk in jugs and served raw milk and milk shakes made with raw milk legally to customers. In 2001, approximately 1,350,000 customers visited the dairy.

During November 30, 2002–February 18, 2003, ODH laboratory received 94 *S.* Typhimurium clinical isolates for pulsed-field gel electrophoresis (PFGE) testing. Of these, 60 had an indistinguishable pattern. In addition, patterns from Illinois, Indiana, and Tennessee matched the Ohio pattern.

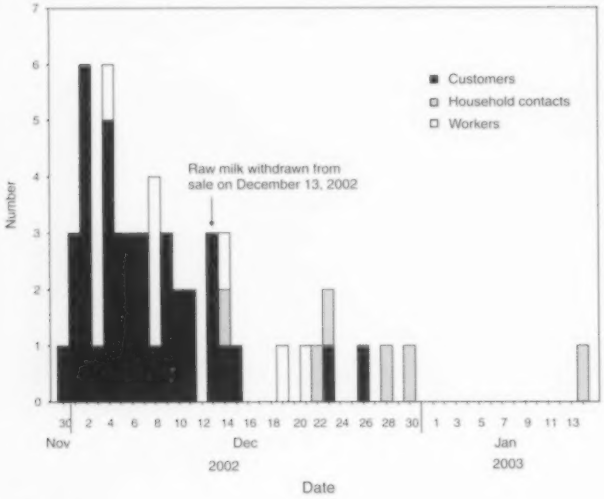
A case of *S.* Typhimurium was defined as PFGE–matched *S.* Typhimurium isolated during November 30, 2002–February 18, 2003, from clinical samples from a person with an epidemiologic link to the dairy. Case finding was conducted by reviewing laboratory culture results from hospital, private, and ODH laboratories, comparing PFGE patterns of *S.* Typhimurium isolates with background isolates statewide and nationwide, screening dairy workers, interviewing meal companions, and alerting public health officials of the outbreak nationwide by using CDC's *Epidemic Information Exchange* (*Epi-X*).

A total of 62 persons had illness consistent with the case definition, including 40 customers, six household contacts, and 16 (7.6%) of 211 dairy workers; patients were from four states (Illinois, Indiana, Ohio, and Tennessee); the median age was 18 years (range: 1–70 years), and 34 (54.8%) were females. Of the 62 patients, 54 (87.1%) reported signs and symptoms of illness, including diarrhea (52 [96.3%]), cramps (41 [75.9%]), fever (37 [68.5%]), chills (29 [53.7%]), body aches (29 [53.7%]), bloody diarrhea (27 [50.0%]), nausea (25 [46.3%]), vomiting (24 [44.4%]), and headache (21 [38.9%]). A total of 50 (80.6%) exhibited more than one symptom. Disease onset occurred during November 30, 2002–January 14, 2003 (Figure).

A case-control study was conducted to verify the initial findings implicating raw milk and to identify other potential sources of infection. The 40 case-patients who were dairy customers were included in the study. Controls were a convenience sample of well meal companions of case-patients. Because of numerous potential exposures to *S.* Typhimurium, dairy workers were excluded from the study; secondary infections among friends or households contacts of case-patients also were excluded. Food histories were obtained through telephone interviews by using a standard questionnaire. State and local investigators reviewed milking, bottling, and capping procedures and collected and tested samples from the food, stools of dairy cows, and the environment.

A total of 40 case-patients and 56 controls were eligible for the case-control study. The median age of case-patients was 8 years (range: 1–69 years); 24 (60.0%) were females. The

FIGURE. Number* of patients with symptomatic *Salmonella* serotype Typhimurium infections, by date of illness onset — Illinois, Indiana, Ohio, and Tennessee, November 30, 2002–January 14, 2003



*N = 53.

median age of controls was 35 years (range: 1–74 years); 34 (60.7%) were females. In the univariate analysis of potential risk factors, only consumption of raw milk was associated significantly with illness. Among 39 case-patients and 55 controls for whom date of milk purchase was known, 37 (94.9%) and 16 (29.1%), respectively, consumed raw milk (odds ratio [OR] = 45.1; 95% confidence interval [CI] = 8.8–311.9). Consumption of other food items, visiting the petting zoo, and petting animals were not associated with illness.

Of the 32 food samples tested, five were positive for *S.* Typhimurium, including three raw skim milk samples, one sample of butter made from raw milk purchased by a customer, and one sample of cream. Skim milk samples were taken from milk either bought or bottled on November 29. The PFGE pattern for all five food isolates matched the outbreak pattern. The 31 animal stool samples collected from cows providing milk and the 23 environmental samples taken from dairy equipment and storage sites were negative for *S.* Typhimurium.

The review of the dairy operation and results of worker screening tests revealed that four barn workers had asymptomatic *S.* Typhimurium infection. Barn workers milked the cows, bottled the milk, and made ice cream.

On December 13, 2002, following an order from local health authorities, the dairy discontinued the sale of all raw milk products. On January 13, 2003, the Ohio Department of Agriculture (ODA) recommended that the sale of all dairy products made with raw milk, including bottled raw whole milk, skim milk, and cream, be discontinued permanently. Several sanitation improvements, primarily for the barn workers, also were recommended, including more frequent hand washing, replacement of the some of the equipment and utensils (e.g., mixing bowls), and enhanced general cleaning in the entire property.

Reported by: *J Holt, D Propes, C Patterson, MBA, Clark County Combined Health District, Springfield; T Bannerman, PhD, L Nicholson, M Bundesen, E Salehi, MPH, M DiOrio, MD, Ohio Dept of Health; C Kirchner, R Tedrick, MS, Ohio Dept of Agriculture. R Duffy, DDS, Division of Adult and Community Health, National Center for Chronic Diseases Prevention and Health Promotion; J Mazurek, MD, EIS Officer, CDC.*

Editorial Note: Each year in the United States, foodborne disease causes an estimated 76 million illnesses. Of these, an estimated 1.4 million are caused by *Salmonella*, resulting in approximately 16,000 hospitalizations and 580 deaths (*3*). Raw bulk tank milk can contain one or more species of pathogenic bacteria, including *Salmonella* spp. (*4,5*). During 1972–2000, a total of 58 raw milk–associated outbreaks were reported to CDC, of which 17 (29%) were caused by *Salmonella* spp. (*1,6*).

This report describes a large multistate outbreak of *S.* Typhimurium transmitted through consumption of raw milk and milk products. Although animal and environmental samples were negative for *S.* Typhimurium, four barn workers were infected with *S.* Typhimurium. In addition, all *S.* Typhimurium isolates from clinical specimens and foods had indistinguishable PFGE patterns. The source for contamination was not determined; however, the findings suggest that contamination of milk might have occurred during the milking, bottling, or capping process.

In 2002, intrastate sale of raw milk for human consumption was legal in 28 states, including Ohio (*1*). As of October 1997, Ohio law did not allow the sale of raw milk except for dairies that were engaged continuously in the business of selling or offering for sale raw milk directly to consumers before October 31, 1965 (*7*). The dairy in this outbreak had been in operation since 1958 and was the only place in Ohio selling raw milk legally. After ODA issued its recommendations, the dairy voluntarily relinquished its license for selling raw milk. As a result, no businesses now sell raw milk to the public legally in Ohio.

Molecular subtyping of *S.* Typhimurium isolates had an important role in identifying cases that were part of this outbreak and defining its extent (*8*). Typhimurium is one of the most common *Salmonella* serotypes isolated from persons in Ohio, and without the specificity of PFGE typing, identifying cases that were part of the outbreak would have been difficult.

Despite the known association of raw milk with disease-causing organisms, some consumers believe that raw milk is of better quality than pasteurized milk (*9*). In several states, producers circumvent regulations and provide raw milk to consumers by establishing cow-leasing programs in which farmers keep and milk cows owned by individuals (CDC, unpublished data, 2003). Consumer education about the hazards of raw milk consumption is needed. Retail milk regulations should be reviewed and strengthened, if needed, to minimize exposure of the public to the hazards of raw milk consumption.

Acknowledgments

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Update: Severe Acute Respiratory Syndrome — United States, 2003

CDC continues to work with state and local health departments, the World Health Organization (WHO), and other partners to investigate cases of severe acute respiratory syndrome (SARS). This report updates reported SARS cases worldwide and in the United States, and summarizes changes in travel recommendations for Beijing and Taiwan, where travel advisories have been downgraded to travel alerts.

During November 1, 2002–July 2, 2003, a total of 8,442 probable SARS cases were reported to WHO from 29 countries, including 73 cases from the United States; 812 deaths (case-fatality proportion: 9.6%) have been reported, with no SARS-related deaths reported from the United States (*1*). In the United States, a total of 419 SARS cases have been reported from 42 states and Puerto Rico, with 346 (83%) cases classified for investigation purposes as suspect SARS and 73 (17%) as probable SARS (more severe illnesses characterized by the presence of pneumonia or acute respiratory distress syndrome) (*2*).

Serologic testing for antibody to SARS-associated coronavirus (SARS-CoV) infection has been completed for 162 suspect and 47 probable cases; no suspect and eight probable cases have demonstrated antibodies to SARS-CoV, all of which have been previously described (*3,4*). Of the 39 probable cases in which no demonstrated antibody to SARS-CoV was identified in a convalescent blood specimen, 25 (64%) patients had specimens that were negative for >28 days after onset of symptoms (range: 29–61 days), and 14 (36%) had specimens that were negative for 22–28 days after onset of symptoms. Of the remaining 26 probable cases, convalescent serum specimens for 25 persons have not been submitted to CDC, and one person, who has recovered, has refused further testing. Obtaining convalescent serum samples is critical to making a final determination about infection with SARS-CoV.

Median age of the eight laboratory-confirmed SARS patients is 43 years (range: 22–53 years); four are female. Seven were hospitalized, and one required mechanical ventilation. All have recovered.

On June 25, CDC downgraded the travel alert status for both Beijing and Taiwan from advisory to alert (*5,6*). Reasons for this change include information that SARS transmission in China, including Beijing, and Taiwan, is limited to a small number of specific settings through direct person-to-person spread with no evidence of ongoing community transmission. In addition, monitoring by the health ministries in China and Taiwan indicates that no new outbreaks of illness are occurring.

Reported by: *State and local health departments. SARS investigative team, CDC.*

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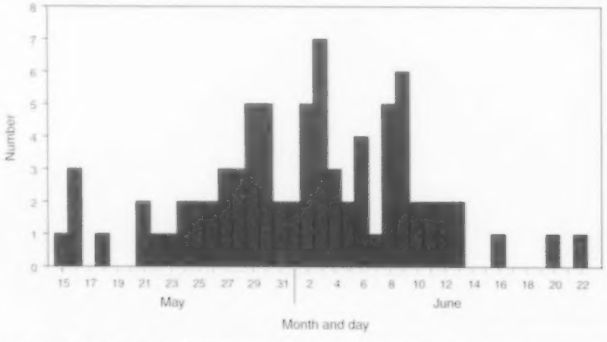
Update: Multistate Outbreak of Monkeypox — Illinois, Indiana, Kansas, Missouri, Ohio, and Wisconsin, 2003

On July 2, 2003, this report was posted on the MMWR *website (http://www.cdc.gov/mmwr).*

CDC and state and local health departments continue to investigate cases of monkeypox among persons who had contact with wild or exotic mammalian pets or persons with monkeypox (*1–3*). This report updates epidemiologic, laboratory, and smallpox vaccine use data for U.S. cases, and summarizes the laboratory-based evidence implicating imported African rodents as the probable source of the outbreak.

As of July 2, a total of 81 cases of monkeypox have been reported to CDC from Wisconsin (39), Indiana (22), Illinois (16), Missouri (two), Kansas (one), and Ohio (one) (Figure);

FIGURE. Number* of persons with monkeypox, by date of first symptom onset — Illinois, Indiana, Kansas, Missouri, Ohio, and Wisconsin, May 15–July 1, 2003



* N = 79. Includes laboratory-confirmed cases and cases meeting suspect or probable case definition. Dates of illness onset were not available for two of 81 patients.

these include 32 (40%) cases laboratory-confirmed at CDC and 49 (60%) suspect and probable cases under investigation (Table). One case was excluded from those reported in the previous update because it met the exclusion criteria outlined in the updated case definition, and three were added (*3*). Of the 81 cases, 43 (53%) were among females; the median age was 27 years (range: 1–51 years). Age data were unavailable for one patient. Among 78 patients for whom data were available, 19 (24%) were hospitalized. The previously reported child with painful adenopathy associated with diffuse pox lesions improved clinically and was discharged from the hospital after 6 days (*3*). Confirmatory testing of skin rash lesions at CDC was positive for monkeypox virus.

Of the 81 reported cases, 31 have been laboratory confirmed at CDC for monkeypox by detection of virus in skin rash lesions by using culture, polymerase chain reaction (PCR), immunohistochemical testing, and/or electron microscopy; one case was confirmed by virus isolation and PCR testing of an oropharyngeal specimen. The number of confirmed cases by state includes Wisconsin (14), Indiana (seven), Illinois (eight), Missouri (two), and Kansas (one). For these laboratory-confirmed cases, the onset of illness ranged from May 16 to June 20. All confirmed patients reported a rash, and all but one reported at least one other clinical sign or symptom, including fever, respiratory symptoms, and/or lymphadenopathy. The median incubation period* was 12 days (range: 1–31 days). The majority of patients with confirmed monkeypox reported exposure to wild or exotic mammals, including prairie dogs; some patients also had contact with other persons with monkeypox virus infection in a household setting. No cases of monkeypox that could be attributed exclusively to person-to-person contact have been confirmed.

TABLE. Number* and percentage of laboratory-confirmed monkeypox cases, by selected characteristics — United States, 2003

Characteristic	No.	(%)
State		
Illinois	8	(25)
Indiana	7	(22)
Kansas	1	(3)
Missouri	2	(6)
Wisconsin	14	(44)
Possible sources of monkeypox exposure		
Prairie dog(s)	13	(41)
Prairie dog(s) and human case(s)	14	(44)
Premises with prairie dogs	5	(16)
Age group (yrs)		
6–18	11	(34)
19–51	21	(66)
Sex		
Female	15	(47)
Male	17	(53)
Clinical features		
Rash	32	(100)
Fever	27	(87)
Respiratory symptoms†	25	(78)
Lymphadenopathy	22	(69)
Hospitalized§	16	(50)
Previous smallpox vaccination¶	8	(25)

* N = 32.
† Includes one or more of the following symptoms: cough, sore throat, shortness of breath, and nasal congestion.
§ Some persons were hospitalized for isolation precautions and not because of severe illness.
¶ Information was available for 22 (69%) of the laboratory-confirmed cases.

Use of Smallpox Vaccine

To prevent further transmission of monkeypox, 28 residents of six states have received smallpox vaccine since June 13; recipients included 26 adults and two children. Vaccine was administered to two laboratory workers and two health-care workers pre-exposure and to 24 persons post-exposure (10 health-care workers, seven household contacts, three laboratory workers, two public health veterinarians, one public health worker, and one work contact). One child vaccinated post-exposure had a rash 6 days after vaccination; PCR testing of skin lesions from the child was positive for monkeypox virus. The child lived in a household with two ill prairie dogs and an adult with laboratory-confirmed monkeypox virus infection. One prairie dog had been present in the household for approximately 1 year and became ill after the introduction of a second ill prairie dog into the home. The child's period of exposure began 25 days before vaccination, when the ill prairie dog was brought into the home; the child's rash began 12 days after the onset of rash illness in the adult household member.

Animal Laboratory Testing

Traceback investigations have implicated a shipment of animals from Ghana that was imported to Texas on April 9 as the probable source of introduction of monkeypox virus into the United States (*1,2*). The shipment contained approximately 800 small mammals of nine different species, including six genera of African rodents. These rodent genera included rope squirrels (*Funiscuirus* sp.), tree squirrels (*Heliosciurus* sp.), Gambian giant rats (*Cricetomys* sp.), brushtail porcupines (*Atherurus* sp.), dormice (*Graphiurus* sp.), and striped mice (*Hybomys* sp.). Gambian rats from this shipment were kept in close proximity to prairie dogs at an Illinois animal vendor implicated in the sale of infected prairie dogs.

CDC laboratory testing of some animals by using PCR and virus isolation demonstrated that one Gambian giant rat,

* Defined as first possible exposure date to illness onset date; however, some persons reported intermittent or continuous exposure.

three dormice, and two rope squirrels from the April 9 importation were infected with monkeypox virus. Evaluation of other animals associated with the shipment is ongoing. Evidence of infection was found in some animals that had been separated from the rest of the shipment on the day of their arrival into the United States, indicating early and possibly widespread infection among the remaining animals in the shipment. The laboratory investigation confirmed that multiple animal species are susceptible to infection with monkeypox virus.

CDC had recommended previously that state health officials place quarantines on commercial facilities or households that had infected animals or received African rodents from the April 9 shipment (*1*). CDC has issued guidance on the quarantine and euthanasia of all rodents from the April 9 shipment, as well as prairie dogs that were exposed to the imported rodents or other animals with illnesses consistent with the case definition for monkeypox (http://www.cdc.gov/ncidod/monkeypox/quarantineremoval.htm). Animals that are euthanized according to the guidance should be incinerated and not buried in a landfill or backyard setting.

CDC and the Food and Drug Administration issued a joint order on June 11 prohibiting the importation of any African rodent. In addition, the order prohibits the sale and transport within the United States of prairie dogs and six genera of African rodents (http://www.cdc.gov/ncidod/monkeypox/pdf/embargo.pdf). To prevent the spread of monkeypox virus into domestic or wild animal populations, the order also prohibits releasing any of these animals into the wild. State and local health departments or departments of agriculture should be consulted for guidance on the safe disposal of animals. The joint order remains in effect regardless of the actions related to the guidance for quarantine and euthanasia of animals of concern.

Health-care providers, veterinarians, and public-health officials who suspect monkeypox in animals or humans should report such cases to their state and local health departments. State health departments should report suspect cases to CDC, telephone 770-488-7100. An updated case definition with revised case exclusion criteria is available at http://www.cdc.gov/ncidod/monkeypox/index.htm. Clinical specimens should be submitted for testing after consultation with the state and local health department. Interpretation of laboratory results requires completion of specimen submission forms, which are available at http://www.cdc.gov/ncidod/monkeypox/diagspecimens.htm.

Reported by: *State and local health departments. Monkeypox investigation team, CDC.*

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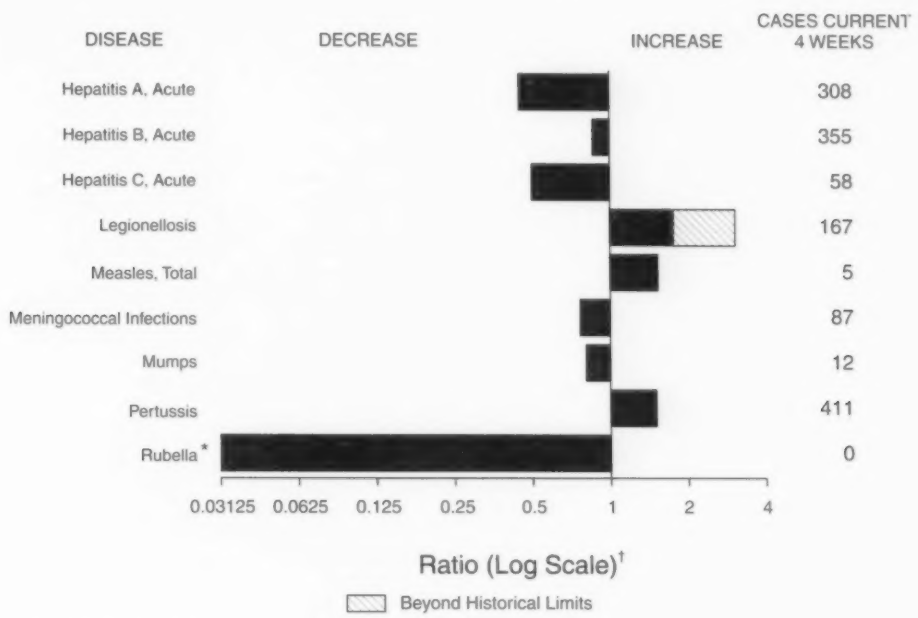
FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals June 28, 2003, with historical data



* No rubella cases were reported for the current 4-week period yielding a ratio for week 26 of zero (0).
† Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending June 28, 2003 (26th Week)*

	Cum. 2003	Cum. 2002		Cum. 2003	Cum. 2002
Anthrax	-	1	Hansen disease (leprosy)†	24	51
Botulism:	-	-	Hantavirus pulmonary syndrome†	10	11
foodborne	7	6	Hemolytic uremic syndrome, postdiarrheal†	47	74
infant	28	36	HIV infection, pediatric†§	108	89
other (wound & unspecified)	11	7	Measles, total	21¶	15**
Brucellosis†	31	59	Mumps	105	152
Chancroid	18	41	Plague	-	-
Cholera	1	-	Poliomyelitis, paralytic	-	-
Cyclosporiasis†	21	79	Psittacosis†	7	12
Diphtheria	-	1	Q fever†	35	23
Ehrlichiosis:	-	-	Rabies, human	-	1
human granulocytic (HGE)†	56	62	Rubella	3	7
human monocytic (HME)†	28	43	Rubella, congenital	-	1
other and unspecified	3	6	Streptococcal toxic-shock syndrome†	106	74
Encephalitis/Meningitis:	-	-	Tetanus	4	12
California serogroup viral†	-	-	Toxic-shock syndrome	68	62
eastern equine†	-	-	Trichinosis	2	10
Powassan†	-	-	Tularemia†	20	28
St. Louis†	-	-	Yellow fever	-	-
western equine†	-	-			

-: No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).
† Not notifiable in all states.
§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP). Last update May 25, 2003.
¶ Of 21 cases reported, 19 were indigenous and two were imported from another country.
** Of 15 cases reported, eight were indigenous and seven were imported from another country.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending June 28, 2003, and June 29, 2002 (26th Week)*

Reporting area	AIDS		Chlamydia†		Coccidiodomycosis		Cryptosporidiosis		Encephalitis/Meningitis West Nile	
	Cum. 2003§	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	19,482	19,671	396,306	404,147	1,506	2,232	887	1,042	-	-
NEW ENGLAND	654	793	13,205	13,326	-	-	57	57	-	-
Maine	27	19	929	728	N	N	5	2	-	-
N.H.	15	19	763	785	-	-	6	13	-	-
Vt.	6	6	499	387	-	-	12	10	-	-
Mass.	277	373	5,285	5,284	-	-	22	19	-	-
R.I.	51	61	1,420	1,367	-	-	9	8	-	-
Conn.	278	315	4,309	4,775	N	N	3	5	-	-
MID. ATLANTIC	4,098	4,228	41,852	44,824	-	-	125	149	-	-
Upstate N.Y.	274	406	9,521	7,930	N	N	37	31	-	-
N.Y. City	1,976	2,051	15,772	15,332	-	-	38	62	-	-
N.J.	787	808	6,074	6,184	-	-	5	11	-	-
Pa.	1,061	963	10,485	15,378	N	N	45	45	-	-
E.N. CENTRAL	1,982	2,238	70,384	74,363	3	15	200	287	-	-
Ohio	303	428	18,963	19,211	-	-	34	63	-	-
Ind.	259	304	8,139	8,262	N	N	26	21	-	-
Ill.	959	1,028	20,486	23,702	-	2	24	56	-	-
Mich.	359	369	15,365	14,872	3	13	43	52	-	-
Wis.	102	109	7,431	8,316	-	-	73	95	-	-
W.N. CENTRAL	358	328	23,308	22,603	1	-	100	107	-	-
Minn.	74	72	4,834	5,228	N	N	44	37	-	-
Iowa	41	46	2,676	2,696	N	N	16	11	-	-
Mo.	177	135	8,340	7,268	-	-	8	15	-	-
N. Dak.	-	1	684	638	N	N	7	10	-	-
S. Dak.	7	2	1,227	1,088	-	-	18	5	-	-
Nebr.¶	25	31	2,076	2,162	1	-	4	22	-	-
Kans.	34	41	3,471	3,523	N	N	3	7	-	-
S. ATLANTIC	5,488	6,359	77,347	75,516	2	1	133	138	-	-
Del.	106	113	1,542	1,343	N	N	3	1	-	-
Md.	558	954	8,264	7,594	2	1	8	6	-	-
D.C.	595	321	1,385	1,630	-	-	4	3	-	-
Va.	481	482	9,314	8,120	-	-	15	4	-	-
W. Va.	42	48	1,231	1,182	N	N	2	1	-	-
N.C.	581	438	13,049	12,151	N	N	15	21	-	-
S.C.	330	440	7,349	7,096	-	-	2	2	-	-
Ga.	736	1,087	16,720	15,695	-	-	52	52	-	-
Fla.	2,059	2,476	18,493	20,705	N	N	32	48	-	-
E.S. CENTRAL	841	903	26,704	26,284	N	N	54	70	-	-
Ky.	79	150	4,103	4,277	N	N	12	1	-	-
Tenn.	374	388	9,397	8,064	N	N	17	38	-	-
Ala.	185	172	6,992	8,266	-	-	22	27	-	-
Miss.	203	193	6,212	5,677	N	N	3	4	-	-
W.S. CENTRAL	2,125	2,164	51,224	53,812	-	5	9	32	-	-
Ark.	65	150	3,694	3,669	-	-	1	4	-	-
La.	368	498	8,577	9,342	N	N	1	8	-	-
Okla.	92	118	5,462	5,139	N	N	4	5	-	-
Tex.	1,600	1,398	33,491	35,662	-	5	3	15	-	-
MOUNTAIN	722	649	23,273	25,084	1,051	1,508	49	67	-	-
Mont.	10	6	989	992	N	N	12	4	-	-
Idaho	13	15	1,230	1,239	N	N	7	17	-	-
Wyo.	4	5	490	448	-	-	2	6	-	-
Colo.	159	132	5,366	7,023	N	N	9	18	-	-
N. Mex.	52	34	3,183	3,811	4	5	2	7	-	-
Ariz.	341	272	7,226	7,399	1,022	1,479	3	7	-	-
Utah	31	35	2,126	1,145	5	7	11	5	-	-
Nev.	112	150	2,663	3,027	20	17	3	3	-	-
PACIFIC	3,214	2,009	69,009	68,335	448	703	160	135	-	-
Wash.	214	256	7,961	7,360	N	N	14	9	-	-
Oreg.	126	193	3,680	3,351	-	-	23	20	-	-
Calif.	2,815	1,500	54,660	53,646	448	703	123	105	-	-
Alaska	12	12	1,864	1,808	-	-	-	-	-	-
Hawaii	47	48	844	2,170	-	-	-	1	-	-
Guam	2	1	-	340	-	-	-	-	-	-
P.R.	514	600	856	1,487	N	N	N	N	-	-
V.I.	15	56	-	96	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

† Chlamydia refers to genital infections caused by *C. trachomatis*.

§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update May 25, 2003.

¶ For Nebraska, data for hepatitis A, B, and C; meningococcal disease; pertussis; streptococcal disease (invasive, group A); and *Streptococcus pneumoniae* (invasive) were collected by using the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 28, 2003, and June 29, 2002 (26th Week)*

Reporting area	*Escherichia coli*, Enterohemorrhagic (EHEC)						Giardiasis		Gonorrhea	
	O157:H7		Shiga toxin positive, serogroup non-O157		Shiga toxin positive, not serogrouped					
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	620	928	71	53	52	9	7,024	8,571	149,677	171,214
NEW ENGLAND	37	70	12	12	6	1	488	775	3,232	3,852
Maine	4	3	1	-	-	-	58	78	105	53
N.H.	6	7	1	-	-	-	17	24	51	63
Vt.	2	3	-	-	-	-	42	56	39	52
Mass.	14	35	2	8	6	1	225	399	1,294	1,656
R.I.	1	5	-	-	-	-	55	60	424	458
Conn.	10	17	8	4	-	-	91	158	1,319	1,570
MID. ATLANTIC	70	102	3	-	17	2	1,395	1,860	16,888	20,478
Upstate N.Y.	28	42	1	-	9	-	393	502	3,633	4,069
N.Y. City	3	6	-	-	-	-	504	712	6,056	6,179
N.J.	5	19	-	-	-	-	112	219	3,552	3,673
Pa.	34	35	2	-	8	2	386	427	3,647	6,557
E.N. CENTRAL	153	229	10	11	9	1	1,141	1,426	31,674	35,772
Ohio	40	40	10	5	9	1	392	377	10,582	10,558
Ind.	26	20	-	-	-	-	-	-	3,111	3,558
Ill.	24	77	-	4	-	-	269	424	9,092	11,954
Mich.	28	33	-	2	-	-	306	389	6,387	6,804
Wis.	35	59	-	-	-	-	174	236	2,502	2,898
W.N. CENTRAL	98	116	8	6	10	1	731	797	7,751	8,664
Minn.	36	32	7	4	-	-	273	270	1,191	1,495
Iowa	13	28	-	-	-	-	105	112	607	593
Mo.	26	21	N	N	1	-	198	223	3,918	4,223
N. Dak.	4	4	-	-	2	-	16	13	30	33
S. Dak.	5	10	-	1	-	-	22	30	98	129
Nebr.	6	14	1	1	-	-	56	70	678	761
Kans.	8	7	-	-	7	1	61	79	1,229	1,430
S. ATLANTIC	55	88	25	12	-	-	1,190	1,262	37,788	43,825
Del.	-	5	N	N	N	N	17	23	579	808
Md.	2	7	-	-	-	-	54	45	3,865	4,298
D.C.	1	-	-	-	-	-	17	20	1,064	1,340
Va.	17	21	4	1	-	-	155	101	4,243	5,083
W. Va.	2	2	-	-	-	-	14	18	423	499
N.C.	5	16	6	-	-	-	N	N	7,343	8,194
S.C.	-	-	-	-	-	-	54	32	3,928	4,336
Ga.	12	24	1	6	-	-	464	395	8,223	8,410
Fla.	16	13	14	5	-	-	415	628	8,120	10,857
E.S. CENTRAL	29	41	-	-	4	-	161	157	12,871	14,862
Ky.	10	13	-	-	4	-	N	N	1,718	1,688
Tenn.	11	20	-	-	-	-	68	70	3,799	4,525
Ala.	6	3	-	-	-	-	93	87	4,221	5,272
Miss.	2	5	-	-	-	-	-	-	3,133	3,377
W.S. CENTRAL	14	42	1	-	2	2	125	72	20,904	23,887
Ark.	4	2	-	-	-	-	68	59	1,955	2,265
La.	-	1	-	-	-	-	4	1	5,375	5,775
Okla.	6	8	-	-	-	-	53	11	2,097	2,219
Tex.	4	31	1	-	2	2	-	1	11,477	13,628
MOUNTAIN	75	85	10	8	4	2	609	624	4,849	5,404
Mont.	2	9	-	-	-	-	35	34	55	46
Idaho	18	6	5	2	-	-	72	38	39	38
Wyo.	2	3	-	1	-	-	9	10	24	29
Colo.	22	29	1	4	4	2	171	216	1,257	1,707
N. Mex.	1	4	3	1	-	-	20	74	521	740
Ariz.	16	8	N	N	N	N	113	78	1,885	1,785
Utah	11	17	1	-	-	-	132	110	192	107
Nev.	3	9	-	-	-	-	57	64	876	952
PACIFIC	89	155	2	4	-	-	1,184	1,598	13,720	14,470
Wash.	23	17	1	-	-	-	108	196	1,428	1,459
Oreg.	19	38	1	4	-	-	154	176	493	397
Calif.	46	77	-	-	-	-	863	1,133	11,342	11,999
Alaska	1	4	-	-	-	-	40	45	264	310
Hawaii	-	19	-	-	-	-	19	48	193	305
Guam	N	N	-	-	-	-	-	6	-	32
P.R.	-	1	-	-	-	-	28	16	94	220
V.I.	-	-	-	-	-	-	-	-	-	22
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 28, 2003, and June 29, 2002 (26th Week)*

Reporting area	*Haemophilus influenzae*, invasive†								Hepatitis (viral, acute), by type	
	All ages		Age <5 years							
	All serotypes		Serotype b		Non-serotype b		Unknown serotype		A	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	828	948	7	16	50	76	93	89	2,660	4,784
NEW ENGLAND	63	64	-	-	4	7	6	1	130	174
Maine	2	1	-	-	-	-	1	-	6	6
N.H.	7	5	-	-	-	-	-	-	8	10
Vt.	6	3	-	-	-	-	-	-	5	-
Mass.	33	29	-	-	4	3	4	1	67	79
R.I.	4	9	-	-	-	-	1	-	11	24
Conn.	11	17	-	-	-	4	-	-	33	55
MID. ATLANTIC	166	174	-	2	1	8	24	18	523	610
Upstate N.Y.	66	67	-	2	1	2	8	6	54	96
N.Y. City	24	37	-	-	-	-	6	7	160	209
N.J.	30	38	-	-	-	-	4	5	67	100
Pa.	46	32	-	-	-	6	6	-	242	205
E.N. CENTRAL	110	197	1	2	4	7	15	25	299	561
Ohio	41	53	-	-	-	1	7	4	61	142
Ind.	23	28	-	1	2	6	-	-	28	31
Ill.	33	73	-	-	-	-	8	13	90	158
Mich.	11	7	1	1	2	-	-	-	99	124
Wis.	2	36	-	-	-	-	-	8	21	106
W.N. CENTRAL	60	32	-	-	6	2	5	3	86	172
Minn.	24	17	-	-	6	2	1	1	20	25
Iowa	-	1	-	-	-	-	-	-	18	35
Mo.	21	8	-	-	-	-	4	2	28	50
N. Dak.	1	4	-	-	-	-	-	-	-	1
S. Dak.	1	1	-	-	-	-	-	-	-	3
Nebr.	1	-	-	-	-	-	-	-	4	7
Kans.	12	1	-	-	-	-	-	-	16	51
S. ATLANTIC	186	210	-	3	6	11	13	17	677	1,344
Del.	-	-	-	-	-	-	-	-	4	8
Md.	42	54	-	1	4	1	-	-	71	149
D.C.	-	-	-	-	-	-	-	-	24	48
Va.	19	16	-	-	-	-	4	2	37	46
W. Va.	7	7	-	-	-	-	-	1	11	10
N.C.	15	21	-	-	-	3	1	-	33	128
S.C.	2	6	-	-	-	-	-	2	18	41
Ga.	44	47	-	-	-	-	5	9	274	278
Fla.	57	59	-	2	2	7	3	3	205	636
E.S. CENTRAL	46	30	1	1	-	2	6	6	77	159
Ky.	2	3	-	-	-	-	-	-	14	35
Tenn.	26	15	-	-	-	-	4	5	42	64
Ala.	16	6	1	1	-	2	1	-	11	23
Miss.	2	6	-	-	-	-	1	1	10	37
W.S. CENTRAL	37	35	1	2	5	5	1	2	57	478
Ark.	5	1	-	-	1	-	-	-	2	24
La.	6	4	-	-	-	-	1	2	23	46
Okla.	24	28	-	-	4	5	-	-	8	22
Tex.	2	2	1	2	-	-	-	-	24	386
MOUNTAIN	109	117	3	3	14	19	17	9	223	298
Mont.	-	-	-	-	-	-	-	-	2	9
Idaho	3	2	-	-	-	-	1	1	-	20
Wyo.	1	2	-	-	-	-	-	-	1	2
Colo.	19	21	-	-	-	-	4	2	29	45
N. Mex.	13	19	-	-	3	4	2	1	8	8
Ariz.	59	52	3	1	6	12	7	3	136	163
Utah	8	14	-	1	2	3	3	-	17	23
Nev.	6	7	-	1	3	-	-	2	30	28
PACIFIC	51	89	1	3	10	15	6	8	588	988
Wash.	5	2	-	1	4	1	1	-	31	87
Oreg.	30	33	-	-	-	-	3	3	32	41
Calif.	11	30	1	2	6	14	2	2	519	839
Alaska	-	1	-	-	-	-	-	1	5	7
Hawaii	5	23	-	-	-	-	-	2	1	14
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	-	-	19	109
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.

* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

† Non-serotype b: nontypeable and type other than b; Unknown serotype: type unknown or not reported. Previously, cases reported without type information were counted as non-serotype b.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 28, 2003, and June 29, 2002 (26th Week)*

Reporting area	Hepatitis (viral, acute), by type				Legionellosis		Listeriosis		Lyme disease	
	B		C							
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	3,105	3,556	662	914	549	416	205	223	3,430	5,070
NEW ENGLAND	119	135	-	17	21	24	10	20	314	698
Maine	1	4	-	-	1	2	2	2	-	-
N.H.	10	10	-	-	2	2	2	2	13	38
Vt.	2	3	-	12	1	2	-	-	6	6
Mass.	94	76	-	5	7	14	4	13	29	612
R.I.	4	17	-	-	2	-	-	1	119	33
Conn.	8	25	U	U	8	4	2	2	147	9
MID. ATLANTIC	584	793	85	50	112	109	40	48	2,591	3,371
Upstate N.Y.	50	64	30	25	37	25	9	14	1,183	1,323
N.Y. City	198	428	-	-	10	20	9	14	2	41
N.J.	215	135	-	4	2	19	5	6	307	1,048
Pa.	121	166	55	21	63	45	17	14	1,099	959
E.N. CENTRAL	210	276	114	57	117	105	24	33	87	375
Ohio	74	41	5	-	70	38	7	9	19	22
Ind.	13	17	-	-	8	5	1	3	4	6
Ill.	1	50	7	12	3	13	5	9	-	19
Mich.	100	143	102	44	36	30	11	8	1	5
Wis.	22	25	-	1	-	19	-	4	63	323
W.N. CENTRAL	141	110	120	432	25	24	6	8	71	64
Minn.	19	8	3	-	3	2	2	-	44	32
Iowa	4	11	-	1	4	6	-	1	8	10
Mo.	91	58	116	423	12	8	1	5	13	17
N. Dak.	-	4	-	-	1	-	-	1	-	-
S. Dak.	2	-	-	-	1	1	-	-	-	-
Nebr.	12	16	1	8	2	7	3	-	2	1
Kans.	13	13	-	-	2	-	-	1	4	4
S. ATLANTIC	932	840	89	93	161	89	53	31	275	420
Del.	4	8	-	-	6	5	N	N	43	59
Md.	52	72	9	6	34	16	7	4	166	246
D.C.	1	9	-	-	1	3	-	-	4	11
Va.	68	105	1	1	9	8	6	3	15	23
W. Va.	7	13	1	1	3	-	2	-	1	5
N.C.	96	131	5	14	16	5	10	3	20	46
S.C.	75	42	19	4	3	5	1	3	1	3
Ga.	328	215	3	39	14	7	16	7	10	1
Fla.	301	245	51	28	75	40	11	11	15	26
E.S. CENTRAL	198	188	43	66	35	13	10	8	22	24
Ky.	39	30	7	2	10	7	1	2	5	9
Tenn.	85	75	8	16	15	1	1	3	8	5
Ala.	37	40	5	3	9	5	6	3	1	6
Miss.	37	43	23	45	1	-	2	-	8	4
W.S. CENTRAL	139	536	135	105	9	10	4	13	16	68
Ark.	8	67	1	9	1	-	-	-	-	-
La.	28	62	25	43	-	4	-	-	3	3
Okla.	24	13	-	-	3	2	1	3	-	-
Tex.	79	394	109	53	5	4	3	10	13	65
MOUNTAIN	318	252	31	30	33	15	16	17	6	7
Mont.	8	3	1	-	1	1	1	-	-	-
Idaho	-	4	-	-	3	-	-	2	2	2
Wyo.	18	12	-	5	2	1	-	-	-	-
Colo.	41	40	19	3	8	3	7	2	1	-
N. Mex.	16	59	-	2	2	1	2	2	-	1
Ariz.	169	83	4	3	9	3	5	8	-	2
Utah	27	20	-	2	6	5	-	3	2	1
Nev.	39	31	7	15	2	1	1	-	1	1
PACIFIC	464	426	45	64	36	27	42	45	48	43
Wash.	30	33	8	13	4	1	1	4	-	-
Oreg.	68	74	7	8	N	N	2	2	12	6
Calif.	357	310	29	43	32	26	39	34	35	36
Alaska	7	5	1	-	-	-	-	-	1	1
Hawaii	2	4	-	-	-	-	-	5	N	N
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	33	86	-	-	-	-	-	2	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 28, 2003, and June 29, 2002 (26th Week)*

Reporting area	Malaria		Meningococcal disease		Pertussis		Rabies, animal		Rocky Mountain spotted fever	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	382	584	870	1,080	2,718	3,454	2,327	3,515	196	334
NEW ENGLAND	10	36	43	61	256	319	221	392	-	1
Maine	1	1	5	2	4	3	22	22	-	-
N.H.	1	5	3	7	19	7	5	15	-	-
Vt.	-	1	-	4	29	58	15	59	-	-
Mass.	8	15	27	33	197	234	87	132	-	1
R.I.	-	3	2	4	6	1	26	29	-	-
Conn.	-	11	6	11	1	16	66	135	-	-
MID. ATLANTIC	87	150	107	144	248	151	210	502	13	33
Upstate N.Y.	25	20	24	32	126	101	147	273	1	-
N.Y. City	43	90	23	23	-	9	1	10	4	7
N.J.	4	22	13	21	18	-	62	71	6	12
Pa.	15	18	47	68	104	41	-	148	2	14
E.N. CENTRAL	39	83	140	163	197	404	41	40	4	9
Ohio	10	11	43	53	110	204	16	10	3	4
Ind.	-	3	28	22	28	22	2	7	-	-
Ill.	14	37	31	36	-	61	6	7	-	5
Mich.	13	24	26	25	24	33	15	10	1	-
Wis.	2	8	12	27	35	84	2	6	-	-
W.N. CENTRAL	21	38	82	86	143	277	329	249	10	52
Minn.	12	14	17	20	56	92	14	16	-	-
Iowa	3	2	15	13	28	92	45	32	1	1
Mo.	1	8	36	34	30	54	4	18	8	49
N. Dak.	-	1	1	-	2	5	33	23	-	-
S. Dak.	1	-	1	2	2	5	58	52	-	-
Nebr.	-	5	5	12	2	3	60	-	1	2
Kans.	4	8	7	5	23	26	115	108	-	-
S. ATLANTIC	112	121	164	161	235	204	1,186	1,271	133	160
Del.	-	1	7	6	1	2	23	24	-	-
Md.	31	40	16	4	31	28	147	207	41	18
D.C.	7	8	-	-	-	1	-	-	-	-
Va.	7	11	15	26	58	88	275	284	2	7
W. Va.	4	2	1	-	5	7	43	90	-	1
N.C.	8	9	19	17	71	20	387	323	60	91
S.C.	3	4	9	14	13	26	74	45	10	27
Ga.	21	16	20	18	23	13	187	212	16	13
Fla.	31	30	77	76	33	19	50	86	4	3
E.S. CENTRAL	7	8	45	59	58	99	32	140	29	54
Ky.	1	2	8	9	15	34	20	14	-	2
Tenn.	4	2	11	23	28	40	-	108	21	25
Ala.	2	2	12	14	12	18	12	18	3	7
Miss.	-	2	14	13	3	7	-	-	5	20
W.S. CENTRAL	11	22	63	130	204	812	149	655	3	20
Ark.	4	1	9	20	4	409	25	-	-	-
La.	1	2	24	25	5	5	-	-	-	-
Okla.	2	-	9	16	12	34	124	57	2	13
Tex.	4	19	21	69	183	364	-	598	1	7
MOUNTAIN	16	25	45	61	530	426	66	126	4	5
Mont.	-	-	2	2	1	2	12	5	1	1
Idaho	1	-	6	3	29	46	2	2	1	-
Wyo.	-	-	2	-	118	7	2	13	1	2
Colo.	11	14	12	20	188	172	9	16	-	1
N. Mex.	-	1	5	3	27	65	4	5	-	-
Ariz.	2	4	14	18	103	90	32	81	1	-
Utah	1	3	-	1	52	26	4	2	-	-
Nev.	1	3	4	14	12	18	1	2	-	1
PACIFIC	79	101	181	215	847	762	93	140	-	-
Wash.	12	11	15	38	219	243	-	-	-	-
Oreg.	7	4	34	33	208	85	3	3	-	-
Calif.	58	78	128	137	412	422	87	111	-	-
Alaska	-	2	1	1	-	2	3	26	-	-
Hawaii	2	6	3	6	8	10	-	-	-	-
Guam	-	-	-	1	-	2	-	-	-	-
P.R.	-	1	2	4	-	2	31	45	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 28, 2003, and June 29, 2002 (26th Week)*

Reporting area	Salmonellosis		Shigellosis		Streptococcal disease, invasive, group A		*Streptococcus pneumoniae*, invasive			
							Drug resistant, all ages		Age <5 years	
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002
UNITED STATES	13,381	15,972	9,055	7,588	3,014	2,801	1,248	1,571	224	168
NEW ENGLAND	742	853	126	124	178	211	16	70	5	1
Maine	54	67	5	3	19	16	-	-	-	-
N.H.	49	47	4	4	17	23	-	-	N	N
Vt.	26	32	5	-	16	9	6	3	2	1
Mass.	418	493	76	91	121	75	N	N	N	N
R.I.	39	49	4	5	5	10	10	6	3	-
Conn.	156	165	32	21	-	78	-	61	U	U
MID. ATLANTIC	1,528	2,264	972	612	504	482	78	76	57	46
Upstate N.Y.	396	590	150	78	231	201	38	67	45	40
N.Y. City	438	587	165	205	71	116	U	U	U	U
N.J.	116	497	122	216	29	97	N	N	N	N
Pa.	578	590	535	113	173	68	40	9	12	6
E.N. CENTRAL	1,911	2,519	815	785	716	601	271	120	87	60
Ohio	612	612	155	325	210	137	185	14	63	-
Ind.	240	185	65	37	63	30	86	104	19	23
Ill.	530	927	405	282	173	187	-	2	-	-
Mich.	308	405	131	69	253	175	N	N	N	N
Wis.	221	390	59	72	17	72	N	N	5	37
W.N. CENTRAL	957	1,039	376	579	214	163	114	319	37	29
Minn.	234	233	44	110	108	82	-	220	31	25
Iowa	154	169	23	59	N	N	N	N	N	N
Mo.	334	365	179	67	42	35	7	5	2	1
N. Dak.	21	24	1	16	8	-	3	1	4	3
S. Dak.	32	39	8	148	17	9	-	1	-	-
Nebr.	69	63	85	125	19	14	-	25	N	N
Kans.	113	146	36	54	20	23	104	67	N	N
S. ATLANTIC	3,534	3,541	3,707	2,480	567	455	635	723	7	16
Del.	32	25	135	8	6	1	1	3	N	N
Md.	354	326	271	422	179	68	-	-	-	13
D.C.	15	37	30	34	10	5	2	-	3	1
Va.	370	363	198	454	72	51	N	N	N	N
W. Va.	38	44	-	3	26	11	40	34	4	2
N.C.	483	495	449	144	66	89	N	N	U	U
S.C.	181	197	221	44	24	28	73	121	N	N
Ga.	685	607	1,096	611	70	90	172	187	N	N
Fla.	1,376	1,447	1,307	760	114	112	347	378	N	N
E.S. CENTRAL	935	976	478	624	122	67	86	93	-	-
Ky.	155	147	58	66	30	11	11	11	N	N
Tenn.	299	237	160	29	92	56	75	82	N	N
Ala.	261	264	162	292	-	-	-	-	N	N
Miss.	220	328	98	237	-	-	-	-	-	-
W.S. CENTRAL	797	1,561	1,168	1,190	107	177	29	140	28	14
Ark.	213	255	47	96	4	4	7	5	-	-
La.	96	330	93	250	1	1	22	135	10	4
Okla.	141	158	442	208	53	31	N	N	18	1
Tex.	347	818	586	636	49	141	N	N	-	9
MOUNTAIN	949	951	456	269	313	343	18	30	3	2
Mont.	48	42	2	2	2	-	-	-	-	-
Idaho	90	58	11	2	12	5	N	N	N	N
Wyo.	48	29	1	3	1	7	4	10	-	-
Colo.	230	251	68	53	85	72	-	-	-	-
N. Mex.	82	130	90	54	75	67	14	20	-	-
Ariz.	291	264	236	124	129	171	-	-	N	N
Utah	94	67	23	16	8	21	-	-	3	2
Nev.	66	110	25	15	1	-	-	-	-	-
PACIFIC	2,028	2,268	957	925	293	302	1	-	-	-
Wash.	238	207	75	54	26	18	-	-	N	N
Oreg.	190	184	52	41	N	N	N	N	N	N
Calif.	1,504	1,719	822	800	233	255	N	N	N	N
Alaska	44	35	4	2	-	-	-	-	N	N
Hawaii	52	123	4	28	34	29	1	-	-	-
Guam	-	25	-	17	-	-	-	3	-	-
P.R.	124	175	1	15	N	N	N	N	N	N
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
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TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending June 28, 2003, and June 29, 2002 (26th Week)*

Reporting area	Syphilis				Tuberculosis		Typhoid fever		Varicella (Chickenpox)
	Primary & secondary		Congenital						
	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003	Cum. 2002	Cum. 2003
UNITED STATES	3,290	3,221	169	207	4,632	6,092	115	152	7,022
NEW ENGLAND	98	60	1	-	142	212	11	8	1,186
Maine	4	1	1	-	5	9	-	-	626
N.H.	8	-	-	-	7	7	1	-	-
Vt.	-	1	-	-	3	4	-	-	454
Mass.	70	45	-	-	86	100	3	6	103
R.I.	10	1	-	-	19	30	2	-	3
Conn.	6	12	-	-	22	62	5	2	-
MID. ATLANTIC	370	360	30	28	892	1,027	17	39	9
Upstate N.Y.	17	19	5	1	113	148	3	3	N
N.Y. City	216	207	18	11	520	498	7	18	-
N.J.	67	69	7	15	153	230	6	13	-
Pa.	70	65	-	1	106	151	1	5	9
E.N. CENTRAL	470	628	38	32	545	590	9	16	3,499
Ohio	115	72	2	-	95	93	-	4	845
Ind.	24	33	7	1	63	55	4	2	-
Ill.	178	232	13	25	266	279	-	5	-
Mich.	145	280	16	6	100	127	5	3	2,167
Wis.	8	11	-	-	21	36	-	2	487
W.N. CENTRAL	79	66	2	-	187	272	2	6	37
Minn.	24	30	-	-	84	119	-	3	N
Iowa	4	2	-	-	11	14	1	-	N
Mo.	29	14	2	-	16	78	1	1	-
N. Dak.	-	-	-	-	-	4	-	-	37
S. Dak.	1	-	-	-	13	10	-	-	-
Nebr.	1	5	-	-	9	9	-	2	-
Kans.	20	15	-	-	54	38	-	-	-
S. ATLANTIC	874	772	29	51	915	1,254	26	16	1,350
Del.	4	8	-	-	-	7	-	-	15
Md.	150	90	3	8	110	134	6	3	-
D.C.	27	25	1	1	-	-	-	-	18
Va.	41	36	1	1	77	119	10	-	347
W. Va.	-	-	-	-	10	12	-	-	816
N.C.	84	154	9	13	138	158	5	-	N
S.C.	55	64	3	6	83	96	-	-	154
Ga.	208	143	3	9	125	233	3	4	-
Fla.	305	252	9	13	372	495	2	9	N
E.S. CENTRAL	155	268	12	15	309	389	3	4	-
Ky.	21	48	1	2	59	68	-	4	N
Tenn.	68	107	6	5	93	144	1	-	N
Ala.	57	85	4	5	113	114	2	-	-
Miss.	9	28	1	3	44	63	-	-	-
W.S. CENTRAL	413	406	29	46	592	944	-	17	605
Ark.	23	17	-	3	49	66	-	-	-
La.	56	65	-	-	-	-	-	-	3
Okla.	25	31	1	1	67	80	-	-	N
Tex.	309	293	28	42	476	798	-	17	602
MOUNTAIN	140	160	15	8	144	191	3	6	336
Mont.	-	-	-	-	-	4	-	-	N
Idaho	6	1	-	-	3	10	-	-	N
Wyo.	-	-	-	-	2	2	-	-	33
Colo.	12	28	3	1	28	37	3	3	-
N. Mex.	25	19	-	-	6	21	-	-	-
Ariz.	87	104	12	7	71	90	-	-	3
Utah	4	2	-	-	15	14	-	2	300
Nev.	6	6	-	-	19	13	-	1	-
PACIFIC	691	501	13	27	906	1,213	44	40	-
Wash.	38	24	-	1	94	116	2	3	-
Oreg.	22	5	-	-	46	49	3	2	-
Calif.	630	467	13	26	724	950	39	35	-
Alaska	-	-	-	-	26	29	-	-	-
Hawaii	1	5	-	-	16	69	-	-	-
Guam	-	6	-	-	-	36	-	-	-
P.R.	99	131	1	17	33	57	-	-	213
V.I.	-	1	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting years 2002 and 2003 are provisional and cumulative (year-to-date).

TABLE III. Deaths in 122 U.S. cities,* week ending June 28, 2003 (26th Week)

Reporting Area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	484	357	82	22	12	11	45
Boston, Mass.	145	97	32	9	4	3	14
Bridgeport, Conn.	44	32	10	1	1	-	-
Cambridge, Mass.	15	13	2	-	-	-	3
Fall River, Mass.	27	21	4	2	-	-	3
Hartford, Conn.	U	U	U	U	U	U	U
Lowell, Mass.	24	16	5	2	1	-	3
Lynn, Mass.	9	7	2	-	-	-	-
New Bedford, Mass.	28	24	2	-	-	2	4
New Haven, Conn.	U	U	U	U	U	U	U
Providence, R.I.	58	44	6	4	1	3	-
Somerville, Mass.	1	1	-	-	-	-	-
Springfield, Mass.	38	23	10	1	3	1	2
Waterbury, Conn.	38	31	4	2	1	-	3
Worcester, Mass.	57	48	5	1	1	2	13
MID. ATLANTIC	1,800	1,241	377	109	38	27	102
Albany, N.Y.	49	34	7	5	2	1	-
Allentown, Pa.	28	21	3	2	2	-	1
Buffalo, N.Y.	80	57	11	8	1	3	6
Camden, N.J.	33	20	10	-	1	2	3
Elizabeth, N.J.	15	15	-	-	-	-	2
Erie, Pa.	27	20	4	1	1	1	-
Jersey City, N.J.	41	29	9	1	1	1	-
New York City, N.Y.	881	605	192	52	17	14	34
Newark, N.J.	46	25	13	6	2	-	6
Paterson, N.J.	18	11	3	1	2	1	2
Philadelphia, Pa.	204	125	57	15	5	2	13
Pittsburgh, Pa.§	32	27	3	2	-	-	4
Reading, Pa.	19	17	2	-	-	-	-
Rochester, N.Y.	125	87	30	6	1	1	9
Schenectady, N.Y.	22	16	5	1	-	-	3
Scranton, Pa.	25	19	4	1	1	-	1
Syracuse, N.Y.	90	70	15	4	-	1	13
Trenton, N.J.	21	11	5	3	2	-	1
Utica, N.Y.	20	18	2	-	-	-	2
Yonkers, N.Y.	24	14	2	1	-	-	2
E.N. CENTRAL	1,886	1,250	410	131	47	44	117
Akron, Ohio	2	2	-	-	-	-	2
Canton, Ohio	41	28	12	-	1	-	5
Chicago, Ill.	384	234	93	32	11	10	23
Cincinnati, Ohio	74	52	14	4	3	1	13
Cleveland, Ohio	128	82	32	9	5	-	6
Columbus, Ohio	178	117	37	13	5	6	13
Dayton, Ohio	123	90	25	7	-	1	7
Detroit, Mich.	160	88	40	18	3	11	11
Evansville, Ind.	48	36	7	2	3	-	7
Fort Wayne, Ind.	60	41	10	3	2	4	-
Gary, Ind.	19	9	4	4	1	1	-
Grand Rapids, Mich.	43	29	11	1	1	1	5
Indianapolis, Ind.	206	132	47	16	8	3	5
Lansing, Mich.	29	21	7	-	-	1	1
Milwaukee, Wis.	106	69	27	9	1	-	5
Peoria, Ill.	53	41	7	3	-	2	2
Rockford, Ill.	53	40	6	5	1	1	3
South Bend, Ind.	47	32	9	3	2	1	4
Toledo, Ohio	78	58	17	2	-	1	5
Youngstown, Ohio	54	49	5	-	-	-	-
W.N. CENTRAL	520	342	117	36	15	10	36
Des Moines, Iowa	56	36	13	3	3	1	4
Duluth, Minn.	23	15	6	1	1	-	-
Kansas City, Kans.	32	20	9	3	-	-	3
Kansas City, Mo.	87	49	26	9	1	2	6
Lincoln, Nebr.	38	31	7	-	-	-	3
Minneapolis, Minn.	53	36	9	4	1	3	2
Omaha, Nebr.	77	48	18	8	2	1	9
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	72	52	14	3	3	-	7
Wichita, Kans.	82	55	15	5	4	3	2
S. ATLANTIC	1,064	674	237	104	26	23	65
Atlanta, Ga.	143	87	33	17	5	1	2
Baltimore, Md.	166	97	42	17	8	2	16
Charlotte, N.C.	77	59	11	3	2	2	6
Jacksonville, Fla.	114	72	26	14	-	2	4
Miami, Fla.	53	34	12	4	-	3	9
Norfolk, Va.	54	35	11	1	2	5	1
Richmond, Va.	54	27	14	10	2	1	4
Savannah, Ga.	61	41	13	6	-	1	4
St. Petersburg, Fla.	66	48	12	4	1	1	7
Tampa, Fla.	172	112	35	19	3	3	10
Washington, D.C.	100	59	27	9	3	2	1
Wilmington, Del.	4	3	1	-	-	-	1
E.S. CENTRAL	786	542	158	41	23	22	55
Birmingham, Ala.	194	142	32	10	5	5	14
Chattanooga, Tenn.	70	43	18	3	4	2	6
Knoxville, Tenn.	93	66	16	4	2	5	4
Lexington, Ky.	63	38	19	3	3	-	10
Memphis, Tenn.	159	106	34	11	6	2	9
Mobile, Ala.	66	52	9	2	1	2	1
Montgomery, Ala.	10	8	1	1	-	-	1
Nashville, Tenn.	131	87	29	7	2	6	10
W.S. CENTRAL	1,519	940	330	134	59	55	81
Austin, Tex.	73	55	8	6	3	1	4
Baton Rouge, La.	16	9	4	2	1	-	-
Corpus Christi, Tex.	U	U	U	U	U	U	U
Dallas, Tex.	180	103	50	15	4	8	12
El Paso, Tex.	91	68	18	3	1	1	2
Ft. Worth, Tex.	130	72	32	14	4	8	12
Houston, Tex.	423	234	90	45	32	22	23
Little Rock, Ark.	78	49	20	5	1	3	4
New Orleans, La.	42	24	13	4	1	-	-
San Antonio, Tex.	259	174	48	23	7	7	10
Shreveport, La.	77	55	15	6	1	-	8
Tulsa, Okla.	150	97	32	11	4	5	6
MOUNTAIN	899	597	180	69	34	17	43
Albuquerque, N.M.	137	85	33	12	5	2	6
Boise, Idaho	46	34	6	5	1	-	2
Colo. Springs, Colo.	45	30	6	6	2	1	-
Denver, Colo.	99	60	23	4	7	5	-
Las Vegas, Nev.	207	137	41	18	8	1	6
Ogden, Utah	32	23	7	1	-	1	2
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	33	21	8	2	2	-	-
Salt Lake City, Utah	125	88	18	8	6	5	13
Tucson, Ariz.	175	119	38	13	3	2	14
PACIFIC	1,103	749	227	76	31	20	98
Berkeley, Calif.	18	12	3	1	-	2	-
Fresno, Calif.	115	87	18	9	-	1	12
Glendale, Calif.	12	9	1	-	1	1	2
Honolulu, Hawaii	82	63	16	1	2	-	7
Long Beach, Calif.	67	44	13	8	2	-	8
Los Angeles, Calif.	224	157	35	24	7	1	13
Pasadena, Calif.	U	U	U	U	U	U	U
Portland, Oreg.	88	59	16	4	5	4	3
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	171	102	45	15	6	3	21
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	157	102	42	6	5	2	21
Santa Cruz, Calif.	U	U	U	U	U	U	U
Seattle, Wash.	107	71	27	5	1	3	5
Spokane, Wash.	62	43	11	3	2	3	6
Tacoma, Wash.	U	U	U	U	U	U	U
TOTAL	10,061¶	6,692	2,118	722	285	229	642

U: Unavailable. -:No reported cases.

* Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of ≥100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

† Pneumonia and influenza.

§ Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶ Total includes unknown ages.

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